

## REMARKS

Claims 1 to 14 as set forth in the foregoing Listing of the Claims are herewith presented for further prosecution. As indicated therein, no Claims have been canceled, Claims 1 to 9 have been amended, and new Claims 10-14 have been added, relative to the previous version of the claims.

As more specifically addressed in the following Claims 1 to 9 have been revised for clarity and to delete references to preferred embodiments. The preferred embodiments previously reflected in Claims 2, 3, 4, 5 and 9 have been made the subject matter of new Claims 10 to 14, respectively. No new matter has been added, and favorable consideration is respectfully solicited.

The Abstract has been revised to eliminate legal phraseology, and withdrawal of the respective objection is respectfully solicited.

Figures 1 and 2 have been revised, and new Figures 2a and 2b have been added, to address objections raised in the Office action.

Figure 1 was objected to for failing to indicate that the respective column represented a prior art device. Applicants have revised Figure 1 accordingly, and withdrawal of the respective objection is respectfully solicited.

Figure 2 was objected to for failing to provide basis for column sections (a) through (h) and for certain cross-sectional areas. Accordingly, applicants have revised Figure 2 to include the section designation in addition to the numerals. Support for the respective clarifications is found in the application on page 10, indicated line 30, to page 11, indicated line 16. Additionally, applicants have introduced new Figures 2a and 2b which depict a cross-sectional view of the column at the positions depicted in Figure 2 as (a) - - - (a) and (b) - - - (b), respectively.

Figure 2 was further objected to for allegedly using the reference character "8" to designate both the middle region and the dividing wall. In fact, reference character "8" designates the middle region of the dividing wall, *see application page 11, indicated lines 16-18*. For clarification, applicants respectfully refer to the application, page 2, indicated lines 19-24, which

explains that the distillation column is divided by the dividing wall. As illustrated in Figure 2 and explained in the application on page 10, indicated lines 28-30, the dividing wall divides column sections b) and d) as well as column sections c) and e) from each other through its vertically extending upper and lower sections "7". The middle region of the dividing wall, designated as "8" extends obliquely between the upper and lower sections "7" and divides sections f) and g) from each other. Accordingly, both upper and lower sections indicated by reference character 7 and the middle section indicated by reference character 8 represent parts of the dividing wall and thus, altogether make up the dividing wall.

Further, the figures were objected to for failing to indicate the cross-sectional areas  $A_b$  to  $A_g$ . Applicants' new Figures 2a and 2b depict the respective areas. In light of the foregoing it is respectfully requested that the objections to the drawings be withdrawn. Favorable action is respectfully solicited.

Claims 1 to 9 were objected to for a number of informalities, all of which have been addressed by applicants' amendments:

- The improper reference to Figure 3 has been removed from Claim 5, and
- Claims 1, 5 and 9 have been revised to obviate any lack of proper antecedent basis issues.

Accordingly, it is respectfully requested that the objections to the drawings be withdrawn. Favorable action is respectfully solicited.

Claims 1 to 9 were rejected under 35 U.S.C. §112, ¶2, as being indefinite. For the reasons more specifically set forth in the following, the arguments in support of the rejection are deemed to be insufficient to support the conclusion of unpatentability, and/or the arguments cannot be deemed to be applicable to the claims.

The rejection asserts that Claim 6 is indefinite for referring to a "*bank-up principle*." Applicants respectfully note that the verb "to bank" is used in the English language *inter alia* in the sense of "to rise in or form a bank" and in this sense it is often used together with "up." As such, one having ordinary skill in the pertinent art will readily appreciate that the expression "*bank-up principle*" in the context of Claim 6 refers to a pre-distribution of the liquid in which the liquid is banked-up or accumulated. Applicants also respectfully submit that the original wording which was used in the German application upon which the present application relies for

priority, namely the expression “*Anstauprinzip*,” does not appear to have a single most fitting English language translation. The verb “*anstaue*” translates to “bank, pen up, stem,” and “dam (or pen) up” *see. e.g., the enclosed copies from English-German dictionaries*. Additionally, the English and German language abstracts of WO 2011/015352 and WO 2001/0666213, *copies enclosed*, illustrate that the German expression “*Anstau*” in the context of distillation technology is translated as “backup” as well as “accumulation,” respectively. On the one hand, the referenced material illustrates that one having ordinary skill in the art of distillation technology is well versed with the principle of liquid bank-up, backup or accumulation. On the other hand, the respective principle is referred to by a variety of expressions, all of which appear to be well understood in the pertinent art. The reference to a “*bank-up principle*” therefore is not deemed to render the subject matter of the claim indefinite within the meaning of Section 112, ¶2.

Claims 2-6 and 9 were rejected as being indefinite for referring to preferred ranges. Applicants’ amendment removes the respective ranges and, thus, obviates the issue.

Claims 6 and 9 were rejected as being indefinite for referring to a “*fine liquid distribution*” liquid distribution, and to “*isolating pure*” ethylhexyl p-methoxycinnamate. Applicants have revised Claim 6 to refer to a “*liquid fine distribution*.” The claim specifically sets forth that the respective liquid distribution is based on a capillary principle. Although the term “*fine*” may be a relative term, the term is used in conjunction with the reference to a liquid distribution based on capillary distribution and, as such, cannot be deemed to render the subject matter of Claim 6 indefinite to one having ordinary skill in the pertinent art. Claim 9 has been revised to refer to a “*purification*” of ethylhexyl p-methoxycinnamate and applicants’ amendment, thus, obviates the respective issue.

Last but not least, Claim 9 was rejected as being indefinite for failing to recite an active, positive step. Applicants’ amendment clarifies the respective step and, thus, obviates the issue.

At least for the foregoing reasons, it is respectfully requested that the rejection of Claims 1-9 under Section 112, ¶2, be withdrawn. Favorable action is solicited.

## CONCLUSION

The foregoing shows that the subject matter of applicants' claims is patentable under the pertinent provisions of the statute, and that the claims are in good condition for allowance. In order to facilitate the resolution of any remaining issues or questions presented by this paper, applicants respectfully request that the Examiner directly contact the undersigned by phone to further the discussion. Favorable action is solicited

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Encls.: German-English Dictionary entries "*anstauen*" (2 pages)  
Cover page of WO 2011/015352  
Cover page of WO 2001/66213

# Anstalt ~ Anstrengung

**Anstalt** [ˈanstalt] f (-en) establish- ment; institution; institute; öffent- liche ~ public institution; med. sanatorium, (Am. often sanitarium), asylum; schol. educational establish- ment; school; home; (experiment) station; (in pl. a) preparations, b) measures; ~en machen zu get ready for, prepare for or to do; *fig.* er machte keine ~en zu gehen he would not budge; ~en treffen zu make arrangements for, arrange for; ~sarzt m resident (or house) physi- cian; ~fürsorger f institutional care; ~sinnasse m in-patient, in- mate.

**Anstand** m hunt. stand; mine: ore in sight; *fig.* (-e)s good behav- ior (or breeding or manners pl.); bearing, deportment; decency, propriety, decorum; den ~ verletzen offend against decency; mit ~, decently, properly; mit ~ verlieren lose with a good grace, be a good loser; j-n ~ lehren teach a p. man- ners; paue, delay; objection (an dat. to); keinen ~ nehmen a. make no bones (about a th.).

**anständig** [ˈanstændig] *Adj.* generally: decent; proper, seemly; respectable; price, etc.: reasonable, fair; sufficient; comfortable (*fig- ing*); handsome, generous (*sum*, etc.); *colloq.* es Essen decent food; *etw.* ~s Stück a sizeable piece, quite a hunk; *II. Adj.* decently, etc.; fair and square, *Am. sl.* on the level; thoroughly, soundly, awfully; sich ~ berechnen behave (s.o.s.); es regnet it's raining pretty hard; *II. Adj.* decency; propriety; respectability; fairness.

**Anstands-..** ~besuch m formal call; ~dame f patron; ~formen /pl. proprieties; ~gefühl n (-e)s sense of propriety; delicacy, tact; **2halber** *adv.* for decency's sake; **3los** *adv.* unhastily, casually, promptly, without objection (or further ado); freely; ~regel f rule of etiquette; ~schenkung *fig.* donation based on moral considera- tion; ~swidrig *adj.* indecent, im- proper, unseemly.

**anstarren** *v/t.* (h.) stare at.  
**anstart** *I. prp.* (gen.) instead of, in the place of, in lieu of, in prefer- ence to; *II. cf.:* daß er kam, ~ zu kommen instead of coming.

**anstauen** *v/t.* (h.) dam (or pen) up; sich ~ accumulate; **2ung** *f* damming up; accumulation.

**anstauen** *v/t.* (h.) gaze or stare at (in wonder), gaze (at).

**anstechen** *v/t.* (h.) prick; broach, tap (a barrel); frisch ange- stochen fresh on tap; *tech.* tap off (a furnace); prime (a pump); med. pierce, puncture.

**anstechen** *l.* (h.) stick on; pin on (a badge, etc.); put (or slip) on (a ring); set on fire; kindle (a fire); light (a candle, cigar); med. infect (mit dat. with); *fig.* contaminate; angesteckt werden, catch a disease, be infected; *II. v/t.* (h.) be catching or infectious; ~ad *adj.* infectious, communicable; contagious; *fig.* in- fectious, catching.

**Ansteckung** [ˈanstɛkʊŋ] f (-; -en)

med. infection; contagion; **2sfrei** *adj.* free from infection; ~sherd m cent're (Am. -er) of infection; ~s- stoff m infectious matter, virus.

**anstehen** *v/t.* (irr., h.) stand in a queue, queue up or on (nach for), *Am.* stand in line, line up (for); *fig.* j-m ~n (or become, fit) a p.; *es steht ihm* schlecht, it ill be- comes him; last; be delayed or de- ferred; ~ lassen put off, delay, defer; defer payment of (a debt); hesitate, waver; be to be expected, impend; zur Entscheidung ~ be up for decision; *ich stehe nicht* on, so sagen I am quite prepared to say;

**Anstehen** n delay; hesitation; (standing in a) queue.  
**anstiegen** *v/t.* (irr., sn) terrain: rise, slope; a. rank, tone, etc.; ascend; *fig.* increase, rise, mount; jäh ~ sky-rocket, *Am. sl.* zoom; air pressure: surge; **Anstiegen** n rising, rise; ascending, ascent; in- crease; surge.

**anstellen** *v/t.* (-e)s place (an acc. against); engage, employ, appoint, take on, *Am.* a. hire (applicant); angestellt bei in the employ of, (employed) with; start, set a ma- chine going (or in motion); turn (or switch) on (the light, radio, etc.); carry out, conduct; make; do, cause (mischiefs); ~ Betrachtung; ~ Vergleich wie hat das das an- gestellt? how did you manage that?; was hast du wieder angestellt? what have you been up to again?; *colloq.* was hast du die letzte Woche an- gestellt? what have you been doing with yourself last week?; sich ~ (nach) queue (*Am. line*) up (for); act, behave; sich ~ als ob pretend to infy, set as if; sich (un)geschickt ~ go (or set) to work cleverly (clumsily); stell dich nicht so an! don't make such a fuss!; ~ig *adj.* able, handy, skillful; clever; er ist sehr ~ a. he can turn his hand to anything; **2ung** *f* employment, appointment; position, situation, place, job; **3ungsbedingungen** *f* condition of employment; ~ungs- fähig *adj.* qualified for a post; **3ungsprüfung** *f* qualifying test.

**anstemmen** *v/t.* (h.) stem or press against; sich ~ gegen (acc.) stem a th.; *fig.* oppose, resist, set one's face against.

**ansteuern** *mar. v/t.* (h.) steer or head or make for; shape a course for; **3ungsfeuer** *air.* n approach beacon.

**Anstich** m of barrel: broaching; frischer ~ fresh tap; in fruits: worm-bite, canker.

**Anstieg** [ˈanstɛɪg] m (-e)s ascent; rail, road: gradient, *Am.* grade; *fig.* rise, increase; progress.

**anstreben** *v/t.* (h.) stare (or glare) at.

**anstreifen** *v/t.* (h.) cause, set on foot; provoke, stir up; instigate; j-n zu etw. ~ a. set a p. on (or put a p. on) to do sth.; stir up, incite, suborn (a witness); tech. peg, pin (on); **2er** (in f) m (prime) author; instigator, *fig.* a. abettor, accessory before the fact; ringleader; **3ung** *f* instigation; incitement; abettment,

subornation; auf ~ von at the insti- gation of.

**anstimmen** *v/t.* (h.) strike up (a tune); ~ eine (an instrument); den Grundton ~ give the key-note; ~ *Kloge*led.

**Anstoß** m soccer: kick-off; hockey: bully; weight lifting: jerk; *fig.* im- pulse, impetus; den (ersten) ~, geben zu start, initiate; take the initiative in; offence; *Am.* -se; ~ Steig; ~ erregen (bei j-m) give or cause offence (to a p.), scandalize (a p.); an etw. ~ nehmen take offence at, be scandalized at, take exception to, disapprove; impediment, snag; ohne ~ a.) without hesitation, b) fluently; tech. point of contact; bündiger ~ flush joint; *cl.* impulse.

**Anstoßen** *I. v/t.* (irr., h.) push, strike, knock, bump (acc. or on acc. against); nudge; soccer: kick off; *cl.* impulse (the circuit); *II. v/t.* (irr., sn) bump, knock, stumble (on acc. against); mit dem Kopf an knock one's head against; mit den Gläsern ~ (or clink) glasses; auf j-s Wahl ~ drink a p.'s health; beim Sprechen ~ stammer, stutter; mit der Zunge ~ lisp; ~ on *fig.* border on, abut on; bei j-m offend, shock, scandalize (a p.); ~ad *adj.* adjoining, adjacent, contiguous (on acc. to).

**anständig** [ˈanstændig] *adj.* objection- able, offensive; indecent; shocking, scandalous; **2keit** *f* (-) offensiveness; indecency; scandalous- ness.

**anstrahlen** *v/t.* (h.) irradiate, shed rays on, beam on; floodlight; an- gestrahlt floodlit; *fig.* beam at, give a sunny smile.

**anstreben** *v/t.* (h.) aim at, aspire to, strive for (or gegen against).

**anstreichen** *v/t.* (irr., h.) paint, coat; whitewash; mark, underline (a mistake), check (or tick) off; *fig.* des werde ich ~ I'll make you pay for this; **2er** m (-s;) ~ (house-painter); **3gerät** n spray diffuser; **3spritzpistole** *f* paint- spraying pistol; spritzg. *Stech- nik* *f* painting (or coating) practice.

**anstreifen** *v/t.* (h.); ~ on (acc.) brush against, touch lightly, graze a th.

**Anstreng** [ˈanstɛŋg] *I. v/t.* (h.) exert; tax, try, exhaust, strain (body, mind); übermäßig ~ overtax; fatigue, tire (out), be a strain to (a p.); sich ~en o.s., tax one's energies, *Am.* a. drive o.s.; over- exert o.s.; overdo it; make every effort (zu inf., to inf.), endeavor (to inf.); streng dich mal an! pull yourself together!; alle Kräfte ~ strain every nerve, do one's utmost; an- strengt strenuous, strained, intense; anstrengend ~ exerting (an denken) work (think) hard; *fig.* bring (an ac- tion) (gegen against); *II. v/t.* (h.); das strengt an it is a strain (or hard work) on it; *III. v/t.* (h.); anstrengend, exhausting, strenuous; hard; trying (für to); für die Augen for the eyes; back-breaking; **3ung** *f* (-; -en) strain, stress, exertion; exhaustion, fatigue; effort, m. a.

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endeavor (v/r), attempt ster ~, by supreme ef- muelos.

**Anstrich** m pain; whitewash; paint; (-ing); film; *fig.* ve- ting; air, appear; geben gen. or von give anstücken *v/t.* (h.) acc. to); patch (on) joint, connect.

**Anstrum** m assault, onslaught; erster ~ a shock; *fig.* onset; ~ an for, econ. run on (a b)

**anstormen** *v/t.* (an) charge, storm, rush (against).

**anstormen** *v/t.* (h.) ansuchen *v/t.* (h.); etw. apply (to) or ask solicit, request, petition; *Am.* -en (-s; -) cation, petition; auf request; auf j-s ~ at

**Antarktis** [ˈantarktɪs] *f* arctic; **2isch** *adj.* an- polar.

**antasten** *v/t.* (h.) t finger; *fig.* touch; d break into (supple) encroach upon (a offend, injure; at a dispute).

**Antel** m part, port; share; *fig.* port econ. interest; share *Am.* share of stock; share; share in prc share (of contributio) quota; *fig.* interest, haben on (dat.) a shi pate in, b) take an ~ nehmen an a) take b) sympathize (or le

**2mäßig** *adj.* proport me (-ma:ig) *f* (-) i pathy; ~scheim m shi *Am.* share of stock; ~Aktiär.

**antphonieren** *v/t.* telephone (or call) a ring.

**Antenne** [ˈantɛnə] *f* *Am.* antenna; abt screened aerial; out- side aerial; auszie scope aerial.

**Antennen-..** ~ableit down-lead; ~abstim- tuning; ~draht m a kreis an aerial circuit aerial output, *Am.* an aerial input; ~mast (or tower); ~stab m a

**Anthologie** [ˈantolo- gɪ] anthology.

**Anthraxit** [ˈantʁa:ʁɪt] ~e) anthracite, carbic hard coal; **2farben** (drugs, etc.).

**Anthropo** [ˈantʁopo] *log* [anti (-); -n) anthropo- l-og] *f* (-) anthro- gisch *adj.* anthro- morph ~morf a. anthropomorphic.

**Anti-..** ~anti- [anti-] ~Anti-alkoholiker (in abstinent, teetotaler.



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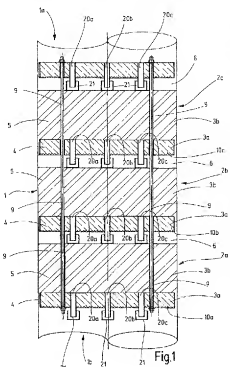
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[Fortsetzung auf der nächsten Seite]

- (54) Title: BACKUP COLUMN
- (54) Bezeichnung: ANSTAU-KOLONNE



(57) Abstract. The invention relates to a backup column for a heat and/or material exchange between a liquid phase and a flowing gaseous phase in the counter flow thereto, wherein the backup column (1) comprises at least two sections (2a-2c) with a first layer (3a) having a high specific surface and a lower throughput capacity and a second layer (3b) arranged on top with a lower specific surface and a higher throughput capacity. According to the invention, the first layer (3a) of the sections (2a-2c) of the backup column (1) is designed for forming a backup zone and thus a spouting bed with pourable first fillers (4) with a high specific surface and a low throughput capacity and the second layer (3b) of said sections (2a-2c) is designed for forming a separating zone for the liquid phase with pourable second fillers (5) comprising a lower specific surface and a higher throughput capacity compared to the first fillers (4) of the first layer (3a).

(57) Zusammenfassung: Die Erfindung betrifft eine Anstau-Kolonne für einen Wärme- und/oder Stoffaustausch zwischen einer flüssigen Phase und einer in Gegenstrom dazu strömenden gasförmigen Phase, wobei die Anstau-Kolonne (1) mindestens zwei Sektionen (2a-2c) mit einer ersten Schicht (3a) mit einer hohen spezifischen Oberfläche und einer geringen Durchsatzkapazität und einer darüber liegende zweite Schicht (3b) mit einer niedrigeren spezifischen Oberfläche und einer höheren Durchsatzkapazität aufweist. Erfindungsgemäß ist vorgesehen, jeweils die erste Schicht (3a) der Sektionen

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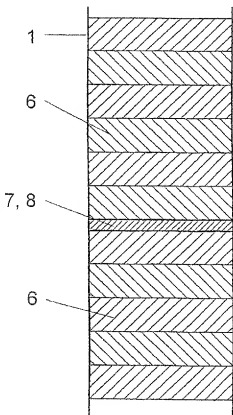
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[Fortsetzung auf der nächsten Seite]

(54) Title: LIQUID DISTRIBUTOR AND METHOD FOR OPERATING THE SAME

(54) Bezeichnung: FLÜSSIGKEITSVERTEILER UND VERFAHREN ZUM BETREIBEN



(57) Abstract: The invention relates to a liquid distributor for packed and/or filled columns, comprising individual, in particular horizontal layers involved in heat and/or material exchange. At least one layer of the column has a flooding, in particular for obtaining an increased density and for creating an accumulation of liquid and a specific surface for distributing the liquid. Said surface is greater than the surface of the overlying and underlying layers by a factor of 1.5 to 10, preferably by a factor of 2 to 3.

(57) Zusammenfassung: Die Erfindung betrifft eine Flüssigkeitsverteiler für Packungs- und/oder Füllkörperkolonnen mit einzelnen insbesondere horizontalen, am Wärme- und/oder Stoffaustausch beteiligten Schichten. Mindestens eine Schicht der Kolonne weist zur größeren Dichte und damit für einen Anstieg insbesondere ein Fluten und für eine Verteilung der Flüssigkeit eine spezifische Oberfläche auf, die um den Faktor 1.5 bis 10, vorzugsweise um den Faktor 2 bis 3 größer ist als die Oberfläche der darüber und darunter liegenden Schicht.

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